Spray deposits of copper and lime sulphur are neither crystalline nor strongly coloured, and for these reasons are not clearly distinguishable in an impression. They are, however, completely removed on to the surface of a cellulose acetate impression and may be developed by treating the impression with a suitable solution which converts the deposit into a more highly coloured compound. Thus a solution of sodium diethyldithiocarbamate converts copper to a dark brown complex and lead acetate solution produces a black deposit of lead sulphide from lime sulphur. Fig. 2 is a high-power photomicrograph showing the distribution of copper from a single spray droplet (approximately 100μ diameter) of Bordeaux mixture on the upper surface of a cyclamen leaf. The particles of copper fungicide have collected in the cuticular depressions at the edges of the epidermal cells. Fig. 3 is a low-power photomicrograph of the deposit produced by discrete drops of 32 per cent lime sulphur on the upper surface of a broad-bean leaf, and it demonstrates the value of the method in rapidly assessing the macroscopic distribution of spray deposits. The use of the methods is not restricted to leaves, but on other surfaces, such as fruit or bark, difficulty may be experienced in applying even pressure to a sufficiently large area. In such cases a satisfactory method is to remove strips of the surface before impressing them.

The method may also be used for studying the distribution and development of fungus spores, which are removed in a cellulose acetate impression of a leaf surface and can be stained with a suitable dye as illustrated in Fig. 4, which shows the distribution of germinating spores of *Botrytis fabae* stained with saffranin on a broad-bean leaf. The method is very useful in studying the range of action of fungicides, since a single impression can show both spore development and the distribution of the fungicide. Population studies of small animals such as mites on plants can be made; all stages of the mites are removed from the leaf surface in cellulose acetate and are easily distinguishable under simple projection.

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Lack of Christmas Factor in Horse Plasma

Bell, Archer and Tomlin[1], using the thromboplastin generation test, recently found the prolonged clotting time of horse blood to be due to a deficiency of anti-hæmophilic factor. However, Soulier and Larrieu[2] have used horse plasma as a source of this factor. The thrombin generation test[3,4] is useful in differentiating between classical hæmophilia and Christmas disease[5]. Applied to citrated horse plasma (containing 130,000 platelets per c.mm.) the following results were obtained (Fig. 1).

Curve *A* shows the thrombin generation in 1 ml. normal horse plasma. The addition of 0·2 ml. plasma from a patient with Christmas disease did not improve the results (curve *B*). Addition of normal human serum (curve *C*) made the thrombin generation normal, whereas barium sulphate absorbed normal human plasma without effect (curve *D*). After the addition of 0·2 ml. plasma from a patient with classical hæmophilia (AHF deficiency) the thrombin

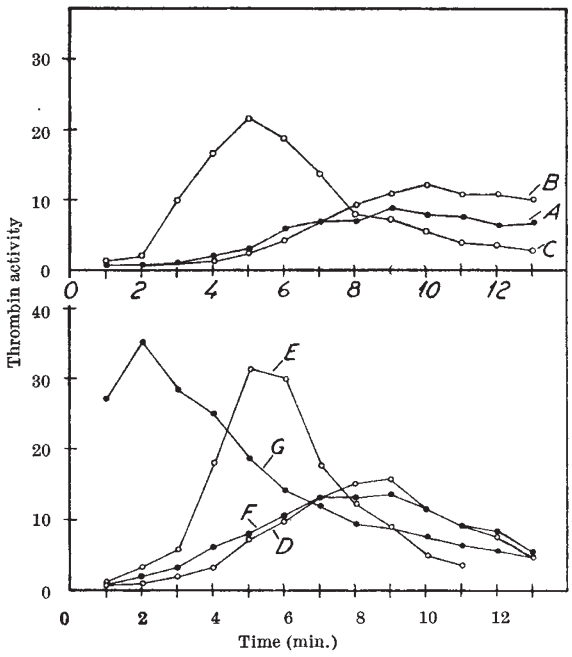

Fig. 1. Thrombin generation in horse plasma. *Abscissa*, reaction time in minutes; *ordinate*, reciprocal clotting time of fibrinogen solutions expressed as $600/t$ (t in sec.)

generation became normal (curve *E*), whereas the addition of plasma from a patient with Christmas disease and classical hæmophilia was without effect on the thrombin formation (curve *F*). Addition of a preparation of Christmas factor made according to Aggeler *et al.*[6] produced a very rapid generation and a high concentration of thrombin (curve *G*).

Apparently the defect in the thromboplastin system of horse plasma is caused by lack of Christmas factor.

This research was aided by grants from Kong Christian den Tiendes Fond and from the Josiah Macy Jr. Foundation, New York (to Dr. Tage Astrup).

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A New Blood Parasite in British Pigs

Parasites of the genus *Eperythrozoon* do not appear to have been reported previously as occurring in the pig in Great Britain. In the United States Splitter[1] has recorded two species, *E. suis* and *E. parvum*; the former causes a disease known as ictero-anæmia in swine. We wish to report the occurrence of ring-like and coccoid structures, closely resembling those described by Splitter, in the blood of British pigs. The organisms are pleomorphic, rods, triangular and dumbbell forms occur; but ovoid rings or cocci are the most characteristic. The parasites are found in close association with the red